Grose, Megan E

From:	Grose, Megan E
Sent:	Monday, October 03, 2011 2:31 PM
To:	'Jason Asbury'
Cc:	Timmermeyer, William F
Subject:	Technical Corrections Water Tank & Access Rd

RE: WV NPDES Permit No. WV0115924
General Permit Registration No. WVR105766
John D. Furst –Tank Site and Access Road

This office has reviewed the Stormwater Pollution Prevention Plan (SWPPP) and finds the information insufficient to satisfy the General Permit Conditions.

In order to receive coverage under the General Permit, the following additional information and corrections are needed:

1. If the waste material from this site is planned to go to waste/borrow site 3, then this project cannot be started until the permit for the waste site has been obtained.

2. Typically when a ditch is rock lined, rock check dams are not employed but if they are shown on the site plans, they must be installed.

3. The grass-lined section of channel should have rock checks.

4. In the construction schedule
   a. Topsoil stockpile must be temporarily stabilized.
   b. Channels must be stabilized as soon as they are installed.
   c. Inlet protection for culverts must be included in the sequence.

5. Include the minimum vegetation requirements in the plans.

   Except as noted below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
   (a) Where the initiation of stabilization measures by the 7th day after construction activities temporary or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as conditions allow.
   (b) Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (e.g., the total time period that construction activity is temporarily halted is less than 21 days) then stabilization measures do not have to be initiated on that portion of the site by the 7th day after construction activities have temporarily ceased.
   (c) Areas where the seed has failed to germinate adequately (uniform perennial vegetative cover with a density of 70%) within 30 days after seeding and mulching must be reseeded immediately, or as soon as weather conditions allow.
   (d) All diversions must be stabilized prior to becoming functional.

6. Twelve months seems a bit long for this project to be completed, especially when silt fence is the only sediment control provided for the pad. Either shorten the time frames or provide a sturdier sediment control.

Please submit three (3) copies of the additional information requested within 30 days of receipt of this email. If additional time is needed, please notify this office.

Please be aware that approval for General Permit coverage must be obtained prior to construction.

Sincerely,

Megan E. Grose
Environmental Resources Specialist
WV Dept. of Environmental Protection
Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
phone: (304)926-0499 x1194
fax: (304)926-0463
Visit our Construction Stormwater Webpage
Check out our E&S BMP Manual
Think before you print

west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304-2345
Telephone Number (304) 926-0495
Fax Number (304) 926-0496

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

February 4, 2013

STEVEN P. MCGOWAN
ARROW WV INC
C/O STEPTOE & JOHNSON, PLLC, PO BOX 1588
CHARLESTON, WV 25326

RE: Construction projects with active registrations under WV/NPDES General Permit No. WV0115924-Registration No. WVR105766 in Fayette Co.
Summit Bechtel Reserve-Water Tank Site and Access Road

Dear Permittee:

You currently hold an active registration under the WV/NPDES Stormwater Construction General Permit (No. WV0115924). This permit was reissued on December 5, 2012, and became effective on January 4, 2013. Said permit can be found on our website at http://www.dep.wv.gov/WWE/Programs/stormwater/csw/Documents/Final_Signed_2012_CSW_General_Permit.pdf.

Sites approved from January 1, 2011, thru January 3, 2013, are hereby granted coverage under General WV/NPDES Water Pollution Control Permit WV0115924. No action is required on your part at this time to maintain permit coverage. However, if new or expanded construction activities are proposed on your site, you must apply electronically for registration of those activities.

Please remember that a Notice of Termination (NOT) form must be submitted to terminate permit coverage when stabilization of the site is complete (NOT form enclosed).

February 4, 2013

If you would like to obtain a copy of the new permit (issued on December 5th, 2012), please contact Sharon Mullins with the Stormwater Team. She can be reached at (304) 926-0499 Ext. 1132.

If you have any questions, please contact Yogesh Patel at (304) 926-0499, Ext. 1014 or by email at Yogesh.P.Patel@wv.gov preferable.

Sincerely,

Scott G. Mandirola
Director

SGM:yp

Enclosure

cc: Env. Inspector
Env. Inspector Supervisor

DEP NPDESEP

From:	DEP NPDESEP
Sent:	Wednesday, November 14, 2012 8:53 AM
To:	DEP NPDESEP; steven.mcgowan@steptoe-johnson.com
Cc:	armando.benincasa@steptoe-johnson.com; jfurst@hmcapital.com; jason.asbury@terradon.com; Hendley, John H; Lilly, James K (DEP); Quinn, Deborah I
Subject:	Approval of Transfer of Ownership for WVR105766, Summit Bechtel Reserve- Water Tank Site and Access Road, Fayette County
Attachments:	NOT 14400_SW_Cons_Termination_notice.doc

Steven P. McGowan
Arrow WV Inc.
c/o Steptoe & Johnson, PLLC
PO Box 1588
Charleston, WV 25326

Physical Site Location: WV Rt. 61, Mount Hope

Please be advised that this e-mail constitutes approval for transfer of WV/NPDES General Water Pollution Control Permit Registration No. WVR105766, issued on October 06, 2011, from Furst, John D. to Arrow WV Inc. has been made in the records of the Division of Water and Waste Management on November 07, 2012. All the responsibilities of the terms and conditions of said permit remains in full force and effect.

Please note that copies of all future correspondence regarding the permit must be forwarded to the Field Inspector and Field Supervisor at the following address:

WV Department of Environmental Protection
Division of Water & Waste Management
Permitting and Engineering Branch
601 57th Street SE
Charleston, WV 25304-2345

Department of Environmental Protection
Environmental Enforcement
254 Industrial Drive
Oak Hill, WV 25901

We've also attached a "Notice of Termination" form to be completed and submitted when all disturbed areas are stabilized.

Your annual permit fee has been assessed as $500.00. You will be invoiced by this agency upon the anniversary date of this approval date. Failure to submit the annual fee within ninety (90) days of the due date will render your permit void upon the date you are mailed a certified written notice to that effect.

If any questions, please do not hesitate to contact Alice Cantley at (304) 926-0499 Ext. 1103 or by email at Alice.R.Cantley@wv.gov .

Scott G. Mandirola, Director
WV DEP-Division of Water & Waste Mgt.
601 57th St. SE
Charleston, WV 25304-2345

Phone: (304) 926-0495
Fax: (304) 926-0496

Cantley, Alice E

From: Timmermeyer, William F
Sent: Friday, November 09, 2012 1:32 PM
To: Cantley, Alice E
Subject: FW: Arrow's Transfer

Finally

From: Armando Benincasa [mailto:Armando.Benincasa@steptoe-johnson.com]
Sent: Friday, November 09, 2012 1:31 PM
To: Timmermeyer, William F
Cc: Steven McGowan
Subject: RE: Arrow's Transfer

Yes.

Armando Benincasa
Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Overnight
Chase Tower, 8th Floor
707 Virginia Street, East, Charleston, WV 25301
O: 304-353-8147 F: 304-353-8180 C: 304-550-0921

armando.benincasa@steptoe-johnson.com
www.steptoe-johnson.com

STEPTOE & JOHNSON
ATTORNEYS AT LAW

From: Timmermeyer, William F [mailto:William.F.Timmermeyer@wv.gov]
Sent: Friday, November 09, 2012 12:19 PM
To: Armando Benincasa
Subject: RE: Arrow's Transfer

Do you want us to use this address:

[redacted]

Thanks
Bill

From: Armando Benincasa [mailto:Armando.Benincasa@steptoe-johnson.com]
Sent: Thursday, November 08, 2012 2:14 PM
To: Timmermeyer, William F
Subject: Re: Arrow's Transfer

Please send those documents to Steve McGowan as General Counsel. Do you have his address?

ARROW WV, INC.
An affiliate of the Boy Scouts of America
1325 W. Walnut Hill Road
Irving, Texas 75015-2079

West Virginia Department of Environmental Protection

Re: DEP Permits – Arrow WV, Inc.

Sir:

This letter serves to authorize Steven P. McGowan, General Counsel of Arrow WV, Inc., to sign documents on behalf of Arrow WV, Inc. pertaining to any permits issued to Arrow WV, Inc.

ARROW WV, INC.

BY: _____
John D. Furst

ITS: President

STEPTOE & JOHNSON PLLC
ATTORNEYS AT LAW

Chase Tower, Eighth Floor
P.O. Box 1588
Charleston, WV 25326-1588
(304) 353-8000 (304) 353-8180 Fax
www.steptoe-johnson.com

Writer's Contact Information
(304) 353-8147
Armando.Benincasa@steptoe-johnson.com

March 15, 2012

Via Hand Delivery

Yogesh Patel, P.E.
Division of Water and Waste Management
West Virginia Department of
Environmental Protection
601 57th Street SE
Charleston, West Virginia 25304

RECEIVED MAR 16 2012

Re: Transfer of West Virginia National Pollutant Discharge Elimination System Permits from John D. Furst to Arrow WV, Inc.

Dear Mr. Patel:

Please accept this correspondence as formal notice to the West Virginia Department of Environmental Protection by and on behalf of John D. Furst, by counsel, of the transfer of legal responsibility for compliance with the terms and conditions of those WV/NPDES Permits set forth in attachment A to this letter formally issued to John D. Furst to Arrow WV, Inc., pursuant to 47 Code of State Regulation, Series 10-3.5.d.

In furtherance of this request and pursuant to the applicable regulation cited above, this request is made more than thirty days prior to formal transfer of permit responsibility which shall occur on May 7, 2012. Please find enclosed an original and two copies of Form WRD 10-64N executed by the parties as well as an original and two copies of a Letter Agreement executed by the parties setting forth the time and extent of transfer of permit responsibility.

Should you have any questions regarding this request, please contact me at (304) 353-8147. Thank you in advance for your time and attention to this matter.

Sincerely,

Armando Benincasa

Enclosure
AFB/dav

cc: John D. Furst
Arrow WV, Inc.

CH#5970210v1

ATTACHMENT A

401 Certification No. WQC-10-0012, Issue Date 8/18/11 (The Summit);

Permit No. WV0115924, Registration No. WVR105365, Issue Date 4/28/11 (The Summit – IRT Roads);

Permit No. WV0115924, Registration No. WVR105492, Issue Date 5/13/11 (The Summit Bechtel Family Scout Reserve Road Around Lake A1);

Permit No. WV0115924, Registration No. WVR105508, Issue Date 6/15/11 (AML Loop Road);

Permit No. WV0115924, Registration No. WVR105641, Issue Date 8/10/11 (The Summit Bechtel Family National Scouting Reserve: Dams);

Permit No. WV0115924, Registration No. WVR105669, Issue Date 11/9/11 (The Bechtel Summit – Camp D&E Access Road);

Permit No. WV0115924, Registration No. WVR105670, Issue Date 10/28/11 (The Bechtel Summit – Glen Jean Entrance);

Permit No. WV0115924, Registration No. WVR105757, Issue Date 12/6/11 (The Bechtel Summit – Core Road);

Permit No. WV0115924, Registration No. WVR105766, Issue Date 10/6/11 (Summit Bechtel Reserve Water Tank Site and Access Road);

Permit No. WV0115924, Registration No. WVR105808, Issue Date 10/27/11 (Water Tank Stockpile Site);

Permit No. WV0115924, Registration No. WVR105829, Issue Date 11/22/11 (Waste Area 3/Dam Borrow Area);

Permit No. WV0115924, Registration No. WVR105857, Issue Date 12/14/11 (Adult Camp Utility Corridor);

Permit No. WV0115924, Registration No. WVR105872, Issue Date 2/24/12 (Logistics Access Road);

Permit No. WV0115924, Registration No. WVR105892, Issue Date 1/19/12 (The Summit: Bechtel Family National Scouting Reserve : Dams A and 1.2);

ATTACHMENT A CONTINUED

Permit No. WV0115924, Registration No. WVR105896, Issue Date 2/9/12 (Sawmill Access Road);

Permit No. WV0115924, Registration No. WVR105931, Issue Date 2/15/12 (Village Core Tree House Site);

Permit No. WV0115924, Registration No. WVR105951, Issue Date 2/24/12 (Adventure Point Outlook).

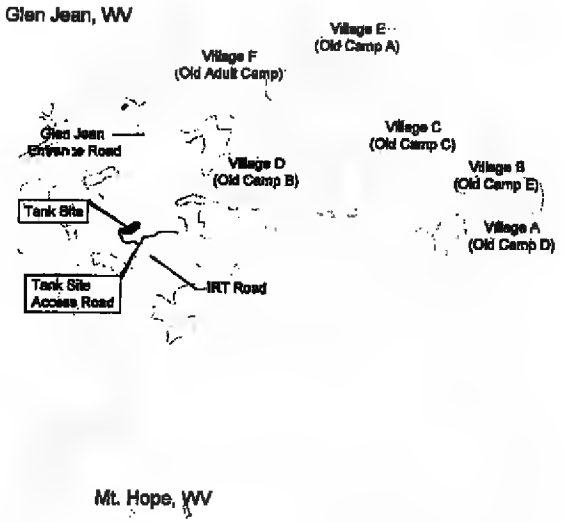
WV8105766 FILE

THE SUMMIT

BECHTEL RESERVE

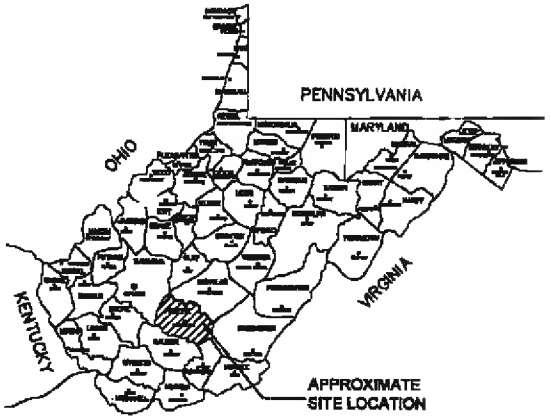
Erosion & Sedimentation Control Plan For Proposed Tank Site & Access Road

APPROVED



SCHEDULE OF DRAWINGS

SHEET NO.	DRAWING TITLE
SE-0	COVER SHEET
SE-1	SEDIMENT AND EROSION CONTROL PLAN
SE-2	SEDIMENT AND EROSION CONTROL DETAILS
SE-3	SEDIMENT AND EROSION CONTROL DETAILS



PREPARED BY:

TERRADON

SUBMITTED TO WVDEP SEPTEMBER 14, 2011
LAST REVISED: OCTOBER 4, 2011
APPROVED 10/6/2011 BY WVDEP

PREPARED FOR:

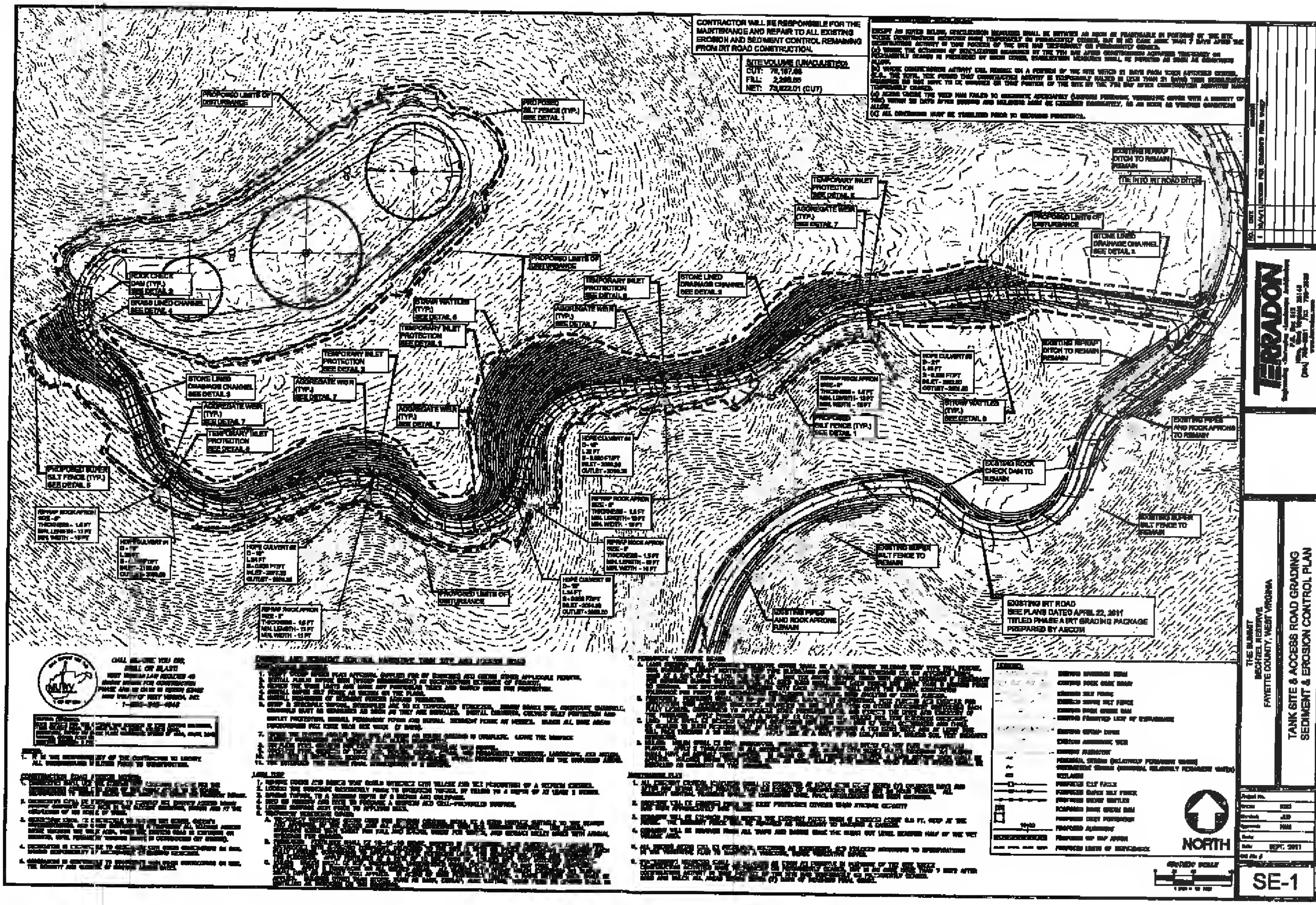
Trinity Works
411 Main Street, Suite 210
Mount Hope, WV 25880
P: 304-877-7907
F: 304-877-7909

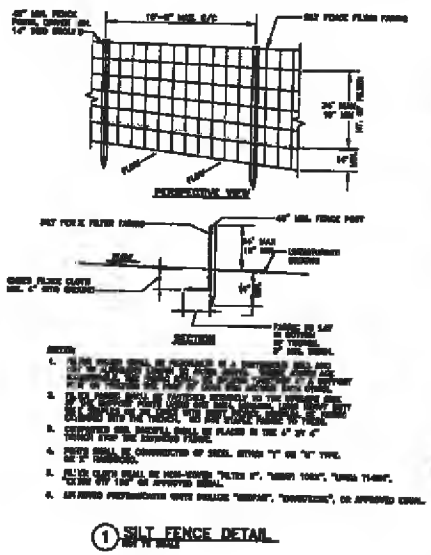
TERRADON

THE SUMMIT
BECHTEL RESERVE
FAYETTE COUNTY, WEST VIRGINIA

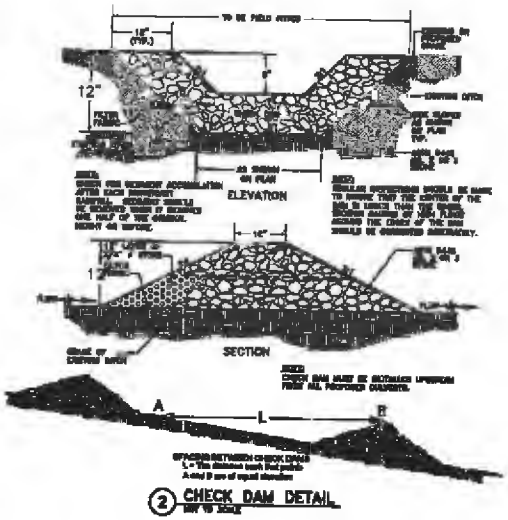
COVER SHEET

SE-0


CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR TO ALL EXISTING EROSION AND SEDIMENT CONTROL REMAINING FROM IRT ROAD CONSTRUCTION.
SITE VOLUME (UNADJUSTED)
CUT: 76,197.65
FILL: 2,265.65
NET: 73,922.01 (CUT)
PROPOSED LIMITS OF DISTURBANCE
PROPOSED SILT FENCE (TYP.) SEE DETAIL 1
ROCK CHECK DAM (TYP.) SEE DETAIL 2
GRASS LINED CHANNEL SEE DETAIL 4
STONE LINED DRAINAGE CHANNEL SEE DETAIL 3
AGGREGATE WEIR (TYP.) SEE DETAIL 7
TEMPORARY INLET PROTECTION SEE DETAIL 6
STRAW WATTLES (TYP.) SEE DETAIL 8
PROPOSED SUPER SILT FENCE (TYP.) SEE DETAIL 5
EXISTING RIPRAP DITCH TO REMAIN
TIE INTO IRT ROAD DITCH
EXISTING PIPES AND ROCK APRONS TO REMAIN
EXISTING ROCK CHECK DAM TO REMAIN
EXISTING SUPER SILT FENCE TO REMAIN
EXISTING IRT ROAD SEE PLANS DATED APRIL 22, 2011 TITLED PHASE A IRT GRADING PACKAGE PREPARED BY AECOM
TERRADON
THE SUMMIT
BECHTEL RESERVE
FAYETTE COUNTY, WEST VIRGINIA
TANK SITE & ACCESS ROAD GRADING
SEDIMENT & EROSION CONTROL PLAN
LEGEND
NORTH
SEPT. 2011
SE-1



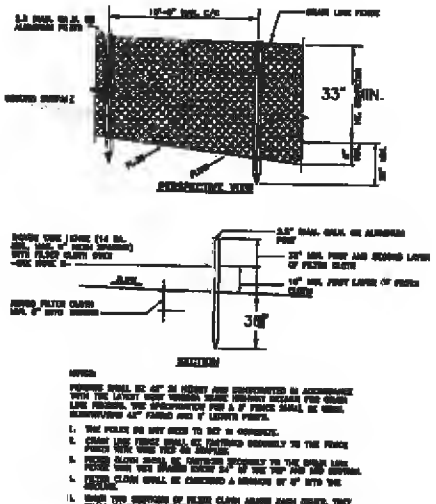
1 SILT FENCE DETAIL



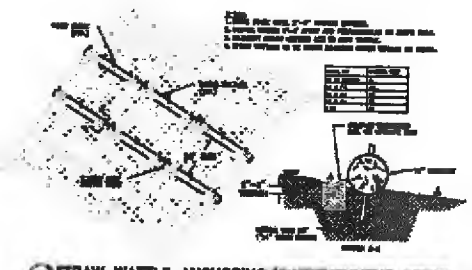
2 CHECK DAM DETAIL

3 STONE LINED DRAINAGE CHANNEL DETAIL

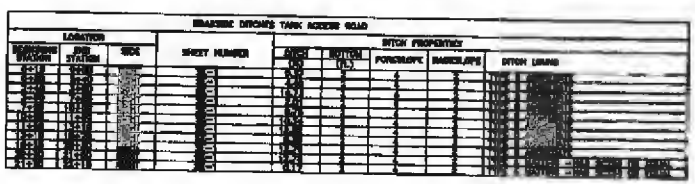
4 GRASS LINED DRAINAGE CHANNEL DETAIL

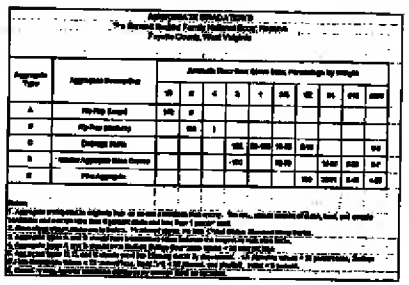


5 SUPER SILT FENCE DETAIL



6 STRAW WATTLE ANCHORING/ENTRENCHMENT DETAIL

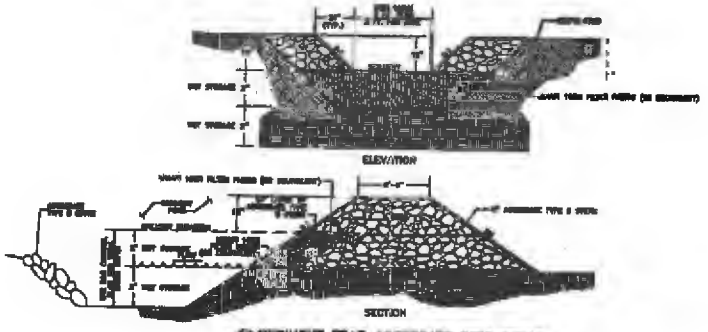




THE SUMMIT
BECKLEY RESERVE
FAYETTE COUNTY, WEST VIRGINIA

TANK SITE & ACCESS ROAD GRADING
SEDIMENT & EROSION CONTROL DETAILS

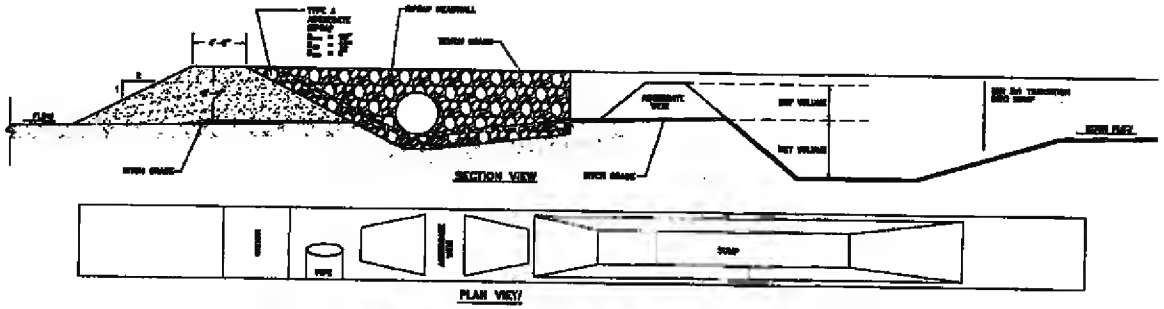
SE-2



⑦ SEDIMENT TRAP AGGREGATE WEIR DETAIL

For Info on NPDES Storm Water Permit
Call: 800-654-2227
07/15/11
Trinity Waste
Tank Site & Access Road
Construction

⑧ PUBLIC NOTICE SIGN



NOTE: PLEASE REFER TO PLAN SHEETS FOR TYPE OF END SECTION/INLET

⑧ TEMPORARY INLET PROTECTION DETAIL

THE SUMMIT
SCENTEL RESERVE
FAYETTE COUNTY, WEST VIRGINIA

TANK SITE & ACCESS ROAD GRADING
SEDIMENT & EROSION CONTROL DETAILS

SEPT. 2011

SE-3

DEP NPDESEP

From:	DEP NPDESEP
Sent:	Thursday, October 06, 2011 8:49 AM
To:	DEP NPDESEP; jfurst@hmcapital.com
Cc:	jason.asbury@terradinn.com; Grose, Megan E; Hendley, John H; Bandy, Jeremy W; Quinn, Deborah J
Subject:	Approval for WVR105766, Summit Bechtel Reserve- Water Tank Site and Access Road, Fayette Co., 8.75 Acres
Attachments:	EP 14151_2007_Construction_Storm_Water_General_Permit[1].pdf; NOT 14400 _SW_Cons_Termination_notice.doc

John D. Furst
PO Box 472
Mount Hope, WV 25880
817-332-3918

Physical Site Location: WV 16, Mt. Hope

Please be advised that this e-mail constitutes approval for your construction activity and your registration no. is WVR105766. You are now authorized to operate under WV/NPDES General Water Pollution Control Permit No. WV0115924, issued on November 5, 2007, copy attached.

You should carefully read the contents of this General Permit and become familiar with all requirements needed to remain in compliance with your permit. We've also attached a "Notice of Termination" form to be completed and submitted when all disturbed areas are stabilized. You can find the permit and Notice of Termination form via the Internet by visiting Permitting, Division of Water and Waste Management at www.wvdep.gov . Your annual permit fee has been assessed as $500.00. You will be invoiced by this agency upon the anniversary date of this approval date. Failure to submit the annual fee within ninety (90) days of the due date will render your permit void upon the date you are mailed a certified written notice to that effect. Please be advised that a pro-rated annual permit fee may be assessed upon the completion date and proper stabilization.

Scott G. Mandirola, Director
WV DEP-Division of Water & Waste Mgt.
601 57th St. SE
Charleston, WV 25304-2345
Phone: (304) 926-0495
Fax: (304) 926-0496

Revised RED 10/5/11 File

REVISED: October 2009

GENERAL PERMIT REGISTRATION NO. WVR 105766
(Official use only)

SITE REGISTRATION APPLICATION FORM
WATER POLLUTION CONTROL PERMIT FOR STORMWATER
LIMIT OF 5 ACRES OR LESS OF DISTURBANCE

1. PROJECT NAME: Summit Bechtel Reserve – Water Tank Site and Access Road
2. APPLICANT'S NAME: John D. First
FEDERAL EMPLOYER IDENTIFICATION NUMBER * 27-0441319
*** Required For Application Processing***

ADDRESS: P.O. Box 472
Mt. Hope, WV 25880

TELEPHONE: Office: 817-332-3918
Cell: 817-999-0225

E-MAIL ADDRESS: jfirst@bmcsmtel.com

3. CONTRACTOR: To Be Determined
ADDRESS: To Be Determined

TELEPHONE: ( ) To Be Determined

4. PREPARER'S NAME: Terradon Corporation
ADDRESS: Attention: Jason Asbury, ASLA
P.O. Box 519
Nitro, WV 25143

TELEPHONE: 304-755-8291
E-MAIL ADDRESS: jason.asbury@terradon.com

5. ACRES DISTURBED: 8.75
RAINFALL ZONE: 3
APPLICATION FEE: $1,170.00

6. LATITUDE DEGREES 37 MINUTES 54 SECONDS 52
LONGITUDE DEGREES 81 MINUTES 09 SECONDS 10
TOPOGRAPHIC MAP WITH SITE LOCATED (ATTACH COPY)

7. NEAREST TOWN: Mt. Hope
COUNTY: Fayette
COUNTY ROUTE: WV16

8. RECEIVING STREAM(S): Barren Branch and Dunloup Creek
BASIN: Lower New River
MUNICIPAL SYSTEM OPERATOR: N/A

9. PROJECT DESCRIPTION
Water storage tank site and access road construction.

10. ESTIMATED START & COMPLETION DATES FOR PROJECT
October 2011 to April 2012

11. CUBIC YARDS OF EXCAVATION (CUT/FILL) & WASTE/BORROW SITES (ATTACH SOILS REPORT)
76,187.66 CY Cut 2,265.65 Fill
73,922.01 CY Waste
Waste Material will be taken to previously approved waste site 2 near Camp A

12. RELATIVE TIME LINE OF CONSTRUCTION ACTIVITIES
Sequence of events upon award of construction contract:
1. Installation of E&S controls (2 weeks)
2. Grading (4 weeks)
3. Tank Construction (14 weeks)
4. Final stabilization (2 weeks)
5. Remove E&S controls (2 weeks)

(Note: Some of these tasks will overlap)

NOTE: IF ANY OF THE FOLLOWING CONDITIONS APPLY, SUBMIT A NOTARIZED, SIGNED STATEMENT FOR BILLING SO THAT THE PROJECT CAN BE SENT OUT TO PUBLIC NOTICE
- GRADING PHASE OF CONSTRUCTION WILL LAST FOR 1 YEAR OR LONGER
- DISTURBANCE OF 100 ACRES OR MORE
- DISCHARGE TO OR UPSTREAM OF TIER 2.5 OR TIER 3 WATERS

SEE INSTRUCTIONS FOR DETAILS AND NOTICE PROCESS

13. NARRATIVE DESCRIPTION OF EROSION AND SEDIMENT CONTROLS
See Sheet SE-1 for narrative of erosion and sediment controls. A list of proposed controls is:
1. Silt fence
2. Mulching
3. Seeding – temporary and final
4. Gravel roadway stabilization
5. Pipe outlet protection
6. Culverts
7. Straw wattles
8. Slope matting

14. SEQUENCE OF CONSTRUCTION
See attached Sheet SE-1 for sequence of construction.

15. DETAILED SITE MAP(S) OF EROSION AND SEDIMENT CONTROLS (ATTACH)
16. SITE MAP OF THE FINAL CONDITIONS SHOWING THE STORMWATER MANAGEMENT FACILITIES (ATTACH)

17. PRE- AND POST-DEVELOPMENT DRAINAGE AREA MAPS IDENTIFYING DISCHARGE POINTS AND SUPPORTING CALCULATIONS (ATTACH)

PRE-DEVELOPMENT PEAK DISCHARGE RATE(S) FOR 1YR/24 HOUR STORM
5.88 cfs

POST=DEVELOPMENT PEAK DISCHARGE RATE(S) FOR 1YR/24 HOUR STORM
6.47 cfs

18. NARRATIVE DESCRIPTION OF THE FINAL STORMWATER MANAGEMENT AND POLLUTION PREVENTION
Stormwater is collected via the culverts and discharged in a safe manner down-slope to its original discharge point.

19. DO YOU HAVE A PERMANENT STORMWATER MANAGEMENT FACILITY ON THIS PROJECT? CHECK THE APPROPRIATE BOX. IF YES, COMPLETE 19A.

☐ Yes.
☒ No.

A. WHICH OF THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) WILL BE UTILIZED FOR THIS PROJECT? ALSO, WHAT IS THE AMOUNT OF DRAINAGE ACREAGE (IN ACRES) THAT WILL FLOW THROUGH THESE BMPS WHILE ACTING AS PERMANENT STORMWATER MANAGEMENT FACILITIES?
LIST COORDINATES AND DRAINAGE FOR EACH POND SEPARATELY

☐ Dry Detention Ponds Acres Drained: _____
Latitude:_____ Longitude: _____

☐ Dry Extended Detention Ponds Acres Drained: _____
Latitude: _____ Longitude: _____

☐ Urban Infiltration Practices Acres Drained: _____
☐ Urban Filtering Practices Acres Drained: _____
☐ Wet Ponds and Wetlands Acres Drained: _____
Latitude: _____ Longitude: _____

Definitions for the above list of BMPs may be found on Page 17 of the Instructions for Completing the Site Registration Application Form.

20. PUBLIC NOTICE SIGN (SEE INSTRUCTIONS AND SECTION G.4.b.6 OF THE GENERAL

PERMIT). ALL APPLICANTS ARE REQUIRED TO POST A PUBLIC NOTICE SIGN ONSITE WITHIN 24 HOURS OF SUBMITTING AN APPLICATION. ATTACH SITE SPECIFIC TEMPLATE.

****

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OFFICIAL SIGNATURE _____ DATE _____

PRINT NAME _____

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YOUR CHECK OR MONEY ORDER FOR THE APPROPRIATE APPLICATION FEE MUST BE MADE PAYABLE TO THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

We will process your personal information (email address, mailing address and/or telephone number) in accordance with the State of West Virginia's Privacy Policy for appropriate and customary business purposes. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. The Division of Water and Waste Management will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact the DEP's Chief Privacy officer at dep.privacyofficer@wv.gov.

ALL SPILLS OR ACCIDENTAL DISCHARGES ARE REQUIRED TO BE REPORTED IMMEDIATELY TO THE EMERGENCY RESPONSE SPILL ALERT SYSTEM TOLL FREE TELEPHONE NUMBER 1-800-642-3074. CALLS FROM OUT OF STATE SHOULD BE MADE TO 304-348-8899.

work

REVISED: October 2009

GENERAL PERMIT REGISTRATION NO. WVR 105766
(Official use only)

SITE REGISTRATION APPLICATION FORM
WV/NPDES GENERAL PERMIT CONSTRUCTION STORMWATER
(THREE ACRES OR GREATER)

1. PROJECT NAME: Summit Bechtel Reserve – Water Tank Site and Access Road
2. APPLICANT'S NAME: John D. Furst

FEDERAL EMPLOYER IDENTIFICATION NUMBER * [redacted]

** Required For Application Processing*

ADDRESS: P.O. Box 472
Mt. Hope, WV 25880

TELEPHONE: Office: 817-332-3918
Cell: 817-999-0225

E-MAIL ADDRESS: jfurst@bmcapital.com

3. CONTRACTOR: To Be Determined
ADDRESS: To Be Determined

TELEPHONE: ( ) To Be Determined

4. PREPARER'S NAME: Terradon Corporation
ADDRESS: Attention: Jason Asbury, ASLA
P.O. Box 519
Nitro, WV 25143
TELEPHONE: 304-755-8291
E-MAIL ADDRESS: jason.asbury@terradon.com

5. ACRES DISTURBED: 8.75
RAINFALL ZONE: 3
APPLICATION FEE: $1,170.00

6. LATITUDE DEGREES 37 MINUTES 54 SECONDS 52
LONGITUDE DEGREES 81 MINUTES 09 SECONDS 10
TOPOGRAPHIC MAP WITH SITE LOCATED (ATTACH COPY)

7. NEAREST TOWN: Mt. Hope
COUNTY: Fayette
COUNTY ROUTE: WV16

8. RECEIVING STREAM(S): Barren Branch and Dunloup Creek
BASIN: Lower New River
MUNICIPAL SYSTEM OPERATOR: N/A

9. PROJECT DESCRIPTION
Water storage tank site and access road construction.

RECEIVED SEP 28 2011

10. ESTIMATED START & COMPLETION DATES FOR PROJECT
October 2011 to November 2012

11. CUBIC YARDS OF EXCAVATION (CUT/FILL) & WASTE/BORROW SITES
(ATTACH SOILS REPORT)
76,187.66 CY Cut 2,265.65 Fill
73,922.01 CY Waste
See attached drawing of location of waste area no. 3.

12. RELATIVE TIME LINE OF CONSTRUCTION ACTIVITIES
Sequence of events upon award of construction contract:
1. Installation of E&S controls (2 weeks)
2. Grading (4 weeks)
3. Tank Construction (40 weeks)
4. Final stabilization (2 weeks)
5. Remove E&S controls (2 weeks)

(Note: Some of these tasks will overlap)

NOTE: IF ANY OF THE FOLLOWING CONDITIONS APPLY, SUBMIT A NOTARIZED, SIGNED STATEMENT FOR BILLING SO THAT THE PROJECT CAN BE SENT OUT TO PUBLIC NOTICE

- GRADING PHASE OF CONSTRUCTION WILL LAST FOR 1 YEAR OR LONGER
- DISTURBANCE OF 100 ACRES OR MORE
- DISCHARGE TO OR UPSTREAM OF TIER 2.5 OR TIER 3 WATERS

SEE INSTRUCTIONS FOR DETAILS AND NOTICE PROCESS

13. NARRATIVE DESCRIPTION OF EROSION AND SEDIMENT CONTROLS
See Sheet SE-1 for narrative of erosion and sediment controls. A list of proposed controls is:
1. Silt fence
2. Mulching
3. Seeding – temporary and final
4. Gravel roadway stabilization
5. Pipe outlet protection
6. Culverts
7. Straw wattles
8. Slope matting

14. SEQUENCE OF CONSTRUCTION
See attached Sheet SE-1 for sequence of construction.

15. DETAILED SITE MAP(S) OF EROSION AND SEDIMENT CONTROLS (ATTACH)
16. SITE MAP OF THE FINAL CONDITIONS SHOWING THE STORMWATER MANAGEMENT FACILITIES (ATTACH)

17. PRE- AND POST-DEVELOPMENT DRAINAGE AREA MAPS IDENTIFYING DISCHARGE POINTS AND SUPPORTING CALCULATIONS (ATTACH)

PRE-DEVELOPMENT PEAK DISCHARGE RATE(S) FOR 1YR/24 HOUR STORM
5.88 cfs

POST-DEVELOPMENT PEAK DISCHARGE RATE(S) FOR 1YR/24 HOUR STORM
6.47 cfs

18. NARRATIVE DESCRIPTION OF THE FINAL STORMWATER MANAGEMENT AND POLLUTION PREVENTION
Stormwater is collected via the culverts and discharged in a safe manner down-slope to its original discharge point.

19. DO YOU HAVE A PERMANENT STORMWATER MANAGEMENT FACILITY ON THIS PROJECT? CHECK THE APPROPRIATE BOX. IF YES, COMPLETE 19A.

☐ Yes.
☒ No.

A. WHICH OF THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) WILL BE UTILIZED FOR THIS PROJECT? ALSO, WHAT IS THE AMOUNT OF DRAINAGE ACREAGE (IN ACRES) THAT WILL FLOW THROUGH THESE BMPS WHILE ACTING AS PERMANENT STORMWATER MANAGEMENT FACILITIES?
LIST COORDINATES AND DRAINAGE FOR EACH POND SEPARATELY

☐ Dry Detention Ponds Acres Drained: ____
Latitude: ____ Longitude: ____

☐ Dry Extended Detention Ponds Acres Drained: ____
Latitude: ____ Longitude: ____

☐ Urban Infiltration Practices Acres Drained: ____
☐ Urban Filtering Practices Acres Drained: ____
☐ Wet Ponds and Wetlands Acres Drained: ____
Latitude: ____ Longitude: ____

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OFFICIAL SIGNATURE J. O. Furst DATE 9-12-11

PRINT NAME Jack O. Furst

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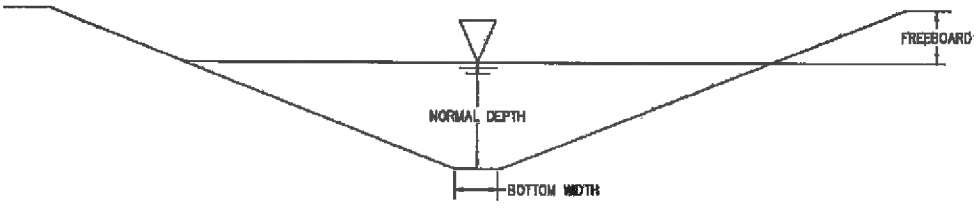
Water Tank Site

Drainage Calculations

SWALES - WATER TANK SITE - PERMANENT EROSION CONTROL

SWALE I.D.	SLOPE ft/ft	Qd cfs	WIDTH ft	10-YR NORMAL DEPTH ft	LEFT SIDE SLOPE x:1	RIGHT SIDE SLOPE x:1	VELOCITY fps	SHEAR STRESS lbs/sf	EROSION PROTECTION	REMARKS
Swale to Drainage Point 1	0.1038	1.36	1	0.21	3	3	3.97	1.36	TYPE A MATTING	
Swale to Drainage Point 2	0.0693	2.38	1	0.32	3	3	3.79	1.38	TYPE A MATTING	
Swale to Drainage Point 3	0.0950	0.93	1	0.50	3	3	0.74	2.97	TYPE A MATTING	
Swale to Drainage Point 4	0.0991	4.60	1	0.40	3	3	5.23	2.47	TYPE A MATTING	
Swale to Drainage Point 5	0.0459	2.19	1	0.33	3	3	3.33	1.01	GRASS	
Swale to Drainage Point 6	0.0676	2.15	1	0.30	3	3	3.77	1.27	TYPE A MATTING	



Pre and Post Development Flow Calculations (Flow Values in cfs)						
Drainage Area	Pre-Development Flow			Post-Development Flow		
	1 Year	10 Year	25 Year	1 Year	10 Year	25 Year
1	0.58	1.34	1.77	0.61	1.36	1.80
2	0.81	2.04	2.78	1.02	2.38	3.16
3	0.33	0.81	1.10	0.41	0.93	1.24
4	1.59	4.04	5.50	1.97	4.60	6.12
5	0.76	1.89	2.56	0.96	2.19	2.90
6	1.37	3.55	4.85	1.56	3.76	5.03
7	2.36	6.06	8.26	3.00	6.97	9.26
8	2.06	4.75	6.29	2.53	5.38	6.99
9	0.72	1.84	2.51	0.92	2.15	2.85
Total Flow	8.58	23.69	32.73	10.80	26.68	35.97

Water Tank Site
Post-Development Calculations
Contract U13

1 Year Storm

Lawrence Hale

Terradon Corporation
401 Jacobson Drive
Poca, WV 25143

Phone: (304)-755-8291

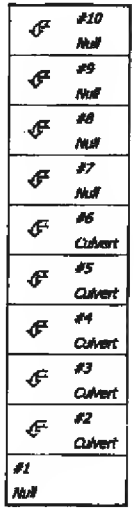
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	1 yr - 24 hr
Rainfall Depth:	2.380 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Null	#1	==>	End	0.000	0.000	Total Outflow
Culvert	#2	==>	#1	0.000	0.000	Discharge Point 1 (HDPE CULVERT #1)
Culvert	#3	==>	#1	0.000	0.000	Discharge Point 2 (HDPE CULVERT #2)
Culvert	#4	==>	#1	0.000	0.000	Discharge Point 3 (HDPE CULVERT #3)
Culvert	#5	==>	#1	0.000	0.000	Discharge Point 4 (HDPE CULVERT #4)
Culvert	#6	==>	#1	0.000	0.000	Discharge Point 5 (HDPE CULVERT #5)
Null	#7	==>	#1	0.000	0.000	Discharge Point 6
Null	#8	==>	#1	0.000	0.000	Discharge Point 7
Null	#9	==>	#1	0.000	0.000	Discharge Point 8
Null	#10	==>	#1	0.000	0.000	Discharge Point 9



Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#10	1.680	1.680	0.92	0.09
#9	3.510	3.510	2.53	0.18
#8	5.470	5.470	3.00	0.28
#7	3.290	3.290	1.56	0.17
#6	1.630	1.630	0.96	0.08
#5	3.590	3.590	1.97	0.19
#4	0.690	0.690	0.41	0.04
#3	1.820	1.820	1.02	0.09
#2	0.990	0.990	0.61	0.05
#1	0.000	22.670	10.80	1.17

Structure Detail:

Structure #10 (Null)

Discharge Point 9

Structure #9 (Null)

Discharge Point 8

Structure #8 (Null)

Discharge Point 7

Structure #7 (Null)

Discharge Point 6

Structure #6 (Culvert)

Discharge Point 5 (HDPE CULVERT #5)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
43.20	7.33	0.0140	1.50	0.00	0.90

Culvert Results:

Design Discharge = 0.96 cfs

Minimum pipe diameter: 1 - 6 inch pipe(s) required

Structure #5 (Culvert)

Discharge Point 4 (HDPE CULVERT #4)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
29.70	10.66	0.0140	1.50	0.00	0.90

Culvert Results:

Design Discharge = 1.97 cfs

Minimum pipe diameter: 1 - 10 inch pipe(s) required

Structure #4 (Culvert)

Discharge Point 3 (HDPE CULVERT #3)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
33.27	9.52	0.0140	1.00	0.00	0.90

Culvert Results::

Design Discharge = 0.41 cfs

Minimum pipe diameter: 1 - 6 inch pipe(s) required

Structure #3 (Culvert)

Discharge Point 2 (HDPE CULVERT #2)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
33.27	9.52	0.0140	1.20	0.00	0.90

Culvert Results:

Design Discharge = 1.02 cfs

Minimum pipe diameter: 1 - 8 inch pipe(s) required

Structure #2 (Culvert)

Discharge Point 1 (HDPE CULVERT #1)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
31.85	9.95	0.0140	1.00	0.00	0.90

Culvert Results:

Design Discharge = 0.61 cfs

Minimum pipe diameter: 1 - 6 inch pipe(s) required

Structure #1 (Null)

Total Outflow

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#10	1	1.680	0.255	0.000	0.000	76.000	TR55	0.92	0.086
	Σ	**1.680**						**0.92**	**0.086**
#9	1	3.510	0.122	0.000	0.000	76.000	TR55	2.53	0.182
	Σ	**3.510**						**2.53**	**0.182**
#8	1	5.470	0.258	0.000	0.000	76.000	TR55	3.00	0.281
	Σ	**5.470**						**3.00**	**0.281**
#7	1	3.290	0.397	0.000	0.000	76.000	TR55	1.56	0.170
	Σ	**3.290**						**1.56**	**0.170**
#6	1	1.630	0.189	0.000	0.000	76.000	TR55	0.96	0.084
	Σ	**1.630**						**0.96**	**0.084**
#5	1	3.590	0.264	0.000	0.000	76.000	TR55	1.97	0.187
	Σ	**3.590**						**1.97**	**0.187**
#4	1	0.690	0.192	0.000	0.000	76.000	TR55	0.41	0.036
	Σ	**0.690**						**0.41**	**0.036**
#3	1	1.820	0.237	0.000	0.000	76.000	TR55	1.02	0.094
	Σ	**1.820**						**1.02**	**0.094**
#2	1	0.990	0.125	0.000	0.000	76.000	TR55	0.61	0.052
	Σ	**0.990**						**0.61**	**0.052**
#1	Σ	**22.670**						**10.80**	**1.173**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1	1. Forest with heavy ground litter	10.57	39.00	369.00	0.820	0.125
#2	1	**Time of Concentration:**					**0.125**
#3	1	1. Forest with heavy ground litter	9.42	62.00	658.00	2.770	0.237
#3	1	**Time of Concentration:**					**0.237**
#4	1	1. Forest with heavy ground litter	12.97	82.00	632.00	0.910	0.192
#4	1	**Time of Concentration:**					**0.192**
#5	1	1. Forest with heavy ground litter	12.85	110.00	856.00	0.900	0.264
#5	1	**Time of Concentration:**					**0.264**
#6	1	1. Forest with heavy ground litter	15.86	108.00	681.00	1.000	0.189

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#6	**1**	**Time of Concentration:**					**0.189**
#7	1	1. Forest with heavy ground litter	9.51	106.00	1,115.00	0.780	0.397
#7	**1**	**Time of Concentration:**					**0.397**
#8	1	1. Forest with heavy ground litter	22.60	252.00	1,115.00	1.200	0.258
#8	**1**	**Time of Concentration:**					**0.258**
#9	1	1. Forest with heavy ground litter	20.12	100.00	497.00	1.130	0.122
#9	**1**	**Time of Concentration:**					**0.122**
#10	1	1. Forest with heavy ground litter	10.05	74.00	736.00	0.800	0.255
#10	**1**	**Time of Concentration:**					**0.255**

Water Tank Site
Post-Development Calculations
Contract U13

10 Year Storm

Lawrence Hale

Terradon Corporation
401 Jacobson Drive
Poca, WV 25143

Phone: (304)-755-8291

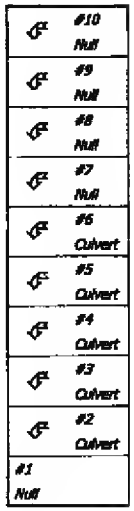
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	10 yr - 24 hr
Rainfall Depth:	3.530 inches

Structure Networking:

Type	Stru #.	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Null	#1	==>	End	0.000	0.000	Total Outflow
Culvert	#2	==>	#1	0.000	0.000	Discharge Point 1 (HDPE CULVERT #1)
Culvert	#3	==>	#1	0.000	0.000	Discharge Point 2 (HDPE CULVERT #2)
Culvert	#4	==>	#1	0.000	0.000	Discharge Point 3 (HDPE CULVERT #3)
Culvert	#5	==>	#1	0.000	0.000	Discharge Point 4 (HDPE CULVERT #4)
Culvert	#6	==>	#1	0.000	0.000	Discharge Point 5 (HDPE CULVERT #5)
Null	#7	==>	#1	0.000	0.000	Discharge Point 6
Null	#8	==>	#1	0.000	0.000	Discharge Point 7
Null	#9	==>	#1	0.000	0.000	Discharge Point 8
Null	#10	==>	#1	0.000	0.000	Discharge Point 9



Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#10	1.680	1.680	2.15	0.19
#9	3.510	3.510	5.38	0.41
#8	5.470	5.470	6.97	0.62
#7	3.290	3.290	3.76	0.38
#6	1.630	1.630	2.19	0.19
#5	3.590	3.590	4.60	0.42
#4	0.690	0.690	0.93	0.08
#3	1.820	1.820	2.38	0.21
#2	0.990	0.990	1.36	0.12
#1	0.000	22.670	26.68	2.61

Structure Detail:

Structure #10 (Null)

Discharge Point 9

Structure #9 (Null)

Discharge Point 8

Structure #8 (Null)

Discharge Point 7

Structure #7 (Null)

Discharge Point 6

Structure #6 (Culvert)

Discharge Point 5 (HDPE CULVERT #5)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
43.20	7.33	0.0140	1.50	0.00	0.90

Culvert Results:

Design Discharge = 2.19 cfs

Minimum pipe diameter: 1 - 10 inch pipe(s) required

Structure #5 (Culvert)

Discharge Point 4 (HDPE CULVERT #4)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
29.70	10.66	0.0140	1.60	0.00	0.90

Culvert Results:

Design Discharge = 4.60 cfs

Minimum pipe diameter: 1 - 15 inch pipe(s) required

Structure #4 (Culvert)

Discharge Point 3 (HDPE CULVERT #3)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
33.27	9.52	0.0140	1.00	0.00	0.90

Culvert Results:

Design Discharge = 0.93 cfs

Minimum pipe diameter: 1 - 8 inch pipe(s) required

Structure #3 (Culvert)

Discharge Point 2 (HDPE CULVERT #2)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
33.27	9.52	0.0140	1.20	0.00	0.90

Culvert Results:

Design Discharge = 2.38 cfs

Minimum pipe diameter: 1 - 12 inch pipe(s) required

Structure #2 (Culvert)

Discharge Point 1 (HDPE CULVERT #1)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
31.85	9.95	0.0140	1.00	0.00	0.90

Culvert Results:

Design Discharge = 1.36 cfs

Minimum pipe diameter: 1 - 10 inch pipe(s) required

Structure #1 (Null)

Total Outflow

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#10	1	1.680	0.255	0.000	0.000	76.000	TR55	2.15	0.192
	Σ	1.680						2.15	0.192
#9	1	3.510	0.122	0.000	0.000	76.000	TR55	5.38	0.405
	Σ	3.510						5.38	0.405
#8	1	5.470	0.258	0.000	0.000	76.000	TR55	6.97	0.625
	Σ	5.470						6.97	0.625
#7	1	3.290	0.397	0.000	0.000	76.000	TR55	3.76	0.378
	Σ	3.290						3.76	0.378
#6	1	1.630	0.189	0.000	0.000	76.000	TR55	2.19	0.187
	Σ	1.630						2.19	0.187
#5	1	3.590	0.264	0.000	0.000	76.000	TR55	4.60	0.416
	Σ	3.590						4.60	0.416
#4	1	0.690	0.192	0.000	0.000	76.000	TR55	0.93	0.080
	Σ	0.690						0.93	0.080
#3	1	1.820	0.237	0.000	0.000	76.000	TR55	2.38	0.210
	Σ	1.820						2.38	0.210
#2	1	0.990	0.125	0.000	0.000	76.000	TR55	1.36	0.116
	Σ	0.990						1.36	0.116
#1	Σ	22.670						26.68	2.610

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1	1. Forest with heavy ground litter	10.57	39.00	369.00	0.820	0.125
#2	1	**Time of Concentration:**					0.125
#3	1	1. Forest with heavy ground litter	9.42	62.00	658.00	0.770	0.237
#3	1	**Time of Concentration:**					0.237
#4	1	1. Forest with heavy ground litter	12.97	82.00	632.00	0.910	0.192
#4	1	**Time of Concentration:**					0.192
#5	1	1. Forest with heavy ground litter	12.85	110.00	856.00	0.900	0.264
#5	1	**Time of Concentration:**					0.264
#6	1	1. Forest with heavy ground litter	15.86	108.00	681.00	1.000	0.189

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#6	**1**	**Time of Concentration:**					**0.189**
#7	1	1. Forest with heavy ground litter	9.51	106.00	1,115.00	0.780	0.397
#7	**1**	**Time of Concentration:**					**0.397**
#8	1	1. Forest with heavy ground litter	22.60	252.80	1,115.00	1.200	0.258
#8	**1**	**Time of Concentration:**					**0.258**
#9	1	1. Forest with heavy ground litter	20.12	100.00	497.00	1.130	0.122
#9	**1**	**Time of Concentration:**					**0.122**
#10	1	1. Forest with heavy ground litter	10.05	74.00	736.00	0.800	0.255
#10	**1**	**Time of Concentration:**					**0.255**

Water Tank Site
Post-Development Calculations
Contract U13

25 Year Storm

Lawrance Hale

Terradon Corporation
401 Jacobson Drive
Poca, WV 25143

Phone: (304)-755-8291

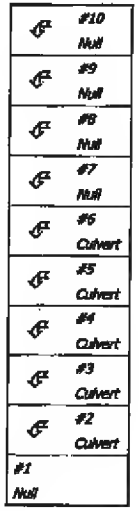
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	4.130 Inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Null	#1	==>	End	0.000	0.000	Total Outflow
Culvert	#2	==>	#1	0.000	0.000	Discharge Point 1 (HDPE CULVERT #1)
Culvert	#3	==>	#1	0.000	0.000	Discharge Point 2 (HDPE CULVERT #2)
Culvert	#4	==>	#1	0.000	0.000	Discharge Point 3 (HDPE CULVERT #3)
Culvert	#5	==>	#1	0.000	0.000	Discharge Point 4 (HDPE CULVERT #4)
Culvert	#6	==>	#1	0.000	0.000	Discharge Point 5 (HDPE CULVERT #5)
Null	#7	==>	#1	0.000	0.000	Discharge Point 6
Null	#8	==>	#1	0.000	0.000	Discharge Point 7
Null	#9	==>	#1	0.000	0.000	Discharge Point 8
Null	#10	==>	#1	0.000	0.000	Discharge Point 9



Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#10	1.680	1.680	2.85	0.25
#9	3.510	3.510	6.99	0.54
#8	5.470	5.470	9.26	0.83
#7	3.290	3.290	5.03	0.50
#6	1.630	1.630	2.90	0.25
#5	3.590	3.590	6.12	0.55
#4	0.690	0.690	1.24	0.11
#3	1.820	1.820	3.16	0.28
#2	0.990	0.990	1.80	0.15
#1	0.000	22.670	35.97	3.46

Structure Detail:

Structure #10 (Null)

Discharge Point 9

Structure #9 (Null)

Discharge Point 8

Structure #8 (Null)

Discharge Point 7

Structure #7 (Null)

Discharge Point 6

Structure #6 (Culvert)

Discharge Point 5 (HDPE CULVERT #5)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
43.20	7.33	0.0140	1.50	0.00	0.90

Culvert Results:

Design Discharge = 2.90 cfs

Minimum pipe diameter: 1 - 12 inch pipe(s) required

Structure #5 (Culvert)

Discharge Point 4 (HDPE CULVERT #4)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
29.70	10.66	0.0140	1.50	0.00	0.90

Culvert Results:

Design Discharge = 6.12 cfs

Minimum pipe diameter: 1 - 21 inch pipe(s) required

Structure #4 (Culvert)

Discharge Point 3 (HDPE CULVERT #3)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
33.27	9.52	0.0140	1.00	0.00	0.90

Culvert Results:

Design Discharge = 1.24 cfs

Minimum pipe diameter: 1 - 8 inch pipe(s) required

Structure #3 (Culvert)

Discharge Point 2 (HDPE CULVERT #2)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
33.27	9.52	0.0140	1.20	0.00	0.90

Culvert Results:

Design Discharge = 3.16 cfs

Minimum pipe diameter: 1 - 15 inch pipe(s) required

Structure #2 (Culvert)

Discharge Point 1 (HDPE CULVERT #1)

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
31.85	9.95	0.0140	1.00	0.00	0.90

Culvert Results:

Design Discharge = 1.80 cfs

Minimum pipe diameter: 1 - 12 inch pipe(s) required

Structure #1 (Null)

Total Outflow

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#10	1	1.680	0.255	0.000	0.000	76.000	TR55	2.85	0.255
	Σ	**1.680**						**2.85**	**0.255**
#9	1	3.510	0.122	0.000	0.000	76.000	TR55	6.99	0.537
	Σ	**3.510**						**6.99**	**0.537**
#8	1	5.470	0.258	0.000	0.000	76.000	TR55	9.26	0.828
	Σ	**5.470**						**9.26**	**0.828**
#7	1	3.290	0.397	0.000	0.000	76.000	TR55	5.03	0.502
	Σ	**3.290**						**5.03**	**0.502**
#6	1	1.630	0.189	0.000	0.000	76.000	TR55	2.90	0.248
	Σ	**1.630**						**2.90**	**0.248**
#5	1	3.590	0.264	0.000	0.000	76.000	TR55	6.12	0.552
	Σ	**3.590**						**6.12**	**0.552**
#4	1	0.690	0.192	0.000	0.000	76.000	TR55	1.24	0.106
	Σ	**0.690**						**1.24**	**0.106**
#3	1	1.820	0.237	0.000	0.000	76.000	TR55	3.16	0.279
	Σ	**1.820**						**3.16**	**0.279**
#2	1	0.990	0.125	0.000	0.000	76.000	TR55	1.80	0.154
	Σ	**0.990**						**1.80**	**0.154**
#1	Σ	**22.670**						**35.97**	**3.460**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1	1. Forest with heavy ground litter	10.57	39.00	369.00	0.820	0.125
#2	**1**	**Time of Concentration:**					**0.125**
#3	1	1. Forest with heavy ground litter	9.42	62.00	658.00	0.770	0.237
#3	**1**	**Time of Concentration:**					**0.237**
#4	1	1. Forest with heavy ground litter	12.97	82.00	632.00	0.910	0.192
#4	**1**	**Time of Concentration:**					**0.192**
#5	1	1. Forest with heavy ground litter	12.85	110.00	856.00	0.900	0.264
#5	**1**	**Time of Concentration:**					**0.264**
#6	1	1. Forest with heavy ground litter	15.86	108.00	681.00	1.000	0.189

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#6	**1**	**Time of Concentration:**					**0.189**
#7	1	1. Forest with heavy ground litter	9.51	106.00	1,115.00	0.780	0.397
#7	**1**	**Time of Concentration:**					**0.397**
#8	1	1. Forest with heavy ground litter	22.60	252.00	1,115.00	1.200	0.258
#8	**1**	**Time of Concentration:**					**0.258**
#9	1	1. Forest with heavy ground litter	20.12	100.00	497.00	1.130	0.122
#9	**1**	**Time of Concentration:**					**0.122**
#10	1	1. Forest with heavy ground litter	10.05	74.00	736.00	0.800	0.255
#10	**1**	**Time of Concentration:**					**0.255**

Water Tank Site
Pre-Development Calculations
Contract U13

1 Year Storm

Lawrence Hale

Terradon Corporation
401 Jacobson Drive
Poca, WV 25143

Phone: (304)-755-8291

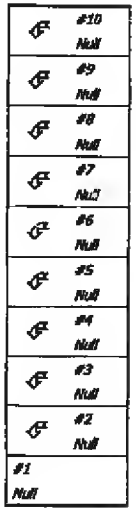
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	1 yr - 24 hr
Rainfall Depth:	2.360 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Null	#1	==>	End	0.000	0.000	Total Outflow
Null	#2	==>	#1	0.000	0.000	Discharge Point 1
Null	#3	==>	#1	0.000	0.000	Discharge Point 2
Null	#4	==>	#1	0.000	0.000	Discharge Point 3
Null	#5	==>	#1	0.000	0.000	Discharge Point 4
Null	#6	==>	#1	0.000	0.000	Discharge Point 5
Null	#7	==>	#1	0.000	0.000	Discharge Point 6
Null	#8	==>	#1	0.000	0.000	Discharge Point 7
Null	#9	==>	#1	0.000	0.000	Discharge Point 8
Null	#10	==>	#1	0.000	0.000	Discharge Point 9



Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#10	1.680	1.680	0.72	0.07
#9	3.510	3.510	2.06	0.15
#8	5.470	5.470	2.36	0.23
#7	3.290	3.290	1.37	0.14
#6	1.630	1.630	0.76	0.07
#5	3.590	3.590	1.59	0.15
#4	0.690	0.690	0.33	0.03
#3	1.820	1.820	0.81	0.07
#2	0.990	0.990	0.58	0.04
#1	0.000	22.670	8.58	0.95

Structure Detail:

Structure #10 (Null)

Discharge Point 9

Structure #9 (Null)

Discharge Point 8

Structure #8 (Null)

Discharge Point 7

Structure #7 (Null)

Discharge Point 6

Structure #6 (Null)

Discharge Point 5

Structure #5 (Null)

Discharge Point 4

Structure #4 (Null)

Discharge Point 3

Structure #3 (Null)

Discharge Point 2

Structure #2 (Null)

Discharge Point 1

Structure #1 (Null)

Total Outflow

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#10	1	1.680	0.255	0.000	0.000	73.000	TR55	0.72	0.070
	Σ	**1.680**						**0.72**	**0.070**
#9	1	3.510	0.111	0.000	0.000	73.000	TR55	2.06	0.147
	Σ	**3.510**						**2.06**	**0.147**
#8	1	5.470	0.247	0.000	0.000	73.000	TR55	2.36	0.229
	Σ	**5.470**						**2.36**	**0.229**
#7	1	3.290	0.281	0.000	0.000	73.000	TR55	1.37	0.138
	Σ	**3.290**						**1.37**	**0.138**
#6	1	1.630	0.189	0.000	0.000	73.000	TR55	0.76	0.068
	Σ	**1.630**						**0.76**	**0.068**
#5	1	3.590	0.233	0.000	0.000	73.000	TR55	1.59	0.151
	Σ	**3.590**						**1.59**	**0.151**
#4	1	0.690	0.175	0.000	0.000	73.000	TR55	0.33	0.029
	Σ	**0.690**						**0.33**	**0.029**
#3	1	1.820	0.210	0.000	0.000	73.000	TR55	0.81	0.074
	Σ	**1.820**						**0.81**	**0.074**
#2	1	0.990	0.107	0.000	0.000	73.000	TR55	0.58	0.042
	Σ	**0.990**						**0.58**	**0.042**
#1	Σ	**22.870**						**8.58**	**0.947**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1	1. Forest with heavy ground litter	14.36	53.00	369.00	0.950	0.107
#2	1	**Time of Concentration:**					**0.107**
#3	1	1. Forest with heavy ground litter	12.01	79.00	658.00	0.870	0.210
#3	1	**Time of Concentration:**					**0.210**
#4	1	1. Forest with heavy ground litter	15.82	100.00	632.00	1.000	0.175
#4	1	**Time of Concentration:**					**0.175**
#5	1	1. Forest with heavy ground litter	16.36	140.00	856.00	1.020	0.233
#5	1	**Time of Concentration:**					**0.233**
#6	1	1. Forest with heavy ground litter	15.86	108.00	681.00	1.000	0.189

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#6	**1**	**Time of Concentration:**					**0.189**
#7	1	1. Forest with heavy ground litter	18.92	211.00	1,115.00	1.100	0.281
#7	**1**	**Time of Concentration:**					**0.281**
#8	1	1. Forest with heavy ground litter	24.57	274.00	1,115.00	1.250	0.247
#8	**1**	**Time of Concentration:**					**0.247**
#9	1	1. Forest with heavy ground litter	24.14	120.00	497.00	1.240	0.111
#9	**1**	**Time of Concentration:**					**0.111**
#10	1	1. Forest with heavy ground litter	10.05	74.00	736.00	0.800	0.255
#10	**1**	**Time of Concentration:**					**0.255**

Water Tank Site

Pre-Development Calculations

Contract U13

10 Year Storm

Lawrence Hale

Terradon Corporation
401 Jacobson Drive
Poca, WV 25143

Phone: (304)-755-8291

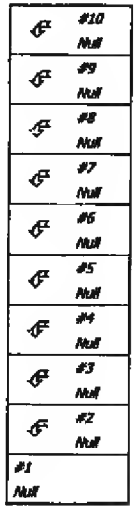
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	10 yr - 24 hr
Rainfall Depth:	3.530 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Null	#1	==>	End	0.000	0.000	Total Outflow
Null	#2	==>	#1	0.000	0.000	Discharge Point 1
Null	#3	==>	#1	0.000	0.000	Discharge Point 2
Null	#4	==>	#1	0.000	0.000	Discharge Point 3
Null	#5	==>	#1	0.000	0.000	Discharge Point 4
Null	#6	==>	#1	0.000	0.000	Discharge Point 5
Null	#7	==>	#1	0.000	0.000	Discharge Point 6
Null	#8	==>	#1	0.000	0.000	Discharge Point 7
Null	#9	==>	#1	0.000	0.000	Discharge Point 8
Null	#10	==>	#1	0.000	0.000	Discharge Point 9



Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#10	1.680	1.680	1.84	0.17
#9	3.510	3.510	4.75	0.35
#8	5.470	5.470	6.06	0.54
#7	3.290	3.290	3.55	0.33
#6	1.630	1.630	1.89	0.16
#5	3.590	3.590	4.04	0.36
#4	0.690	0.690	0.81	0.07
#3	1.820	1.820	2.04	0.18
#2	0.990	0.990	1.34	0.10
#1	0.000	22.670	23.69	2.25

Structure Detail:

Structure #10 (Null)

Discharge Point 9

Structure #9 (Null)

Discharge Point 8

Structure #8 (Null)

Discharge Point 7

Structure #7 (Null)

Discharge Point 6

Structure #6 (Null)

Discharge Point 5

Structure #5 (Null)

Discharge Point 4

Structure #4 (Null)

Discharge Point 3

Structure #3 (Null)

Discharge Point 2

Structure #2 (Null)

Discharge Point 1

Structure #1 (Null)

Total Outflow

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#10	1	1.680	0.255	0.000	0.000	73.000	TR55	1.84	0.166
	Σ	**1.680**						**1.84**	**0.166**
#9	1	3.510	0.111	0.000	0.000	73.000	TR55	4.75	0.350
	Σ	**3.510**						**4.75**	**0.350**
#8	1	5.470	0.247	0.000	0.000	73.000	TR55	6.06	0.544
	Σ	**5.470**						**6.06**	**0.544**
#7	1	3.290	0.281	0.000	0.000	73.000	TR55	3.55	0.328
	Σ	**3.290**						**3.55**	**0.328**
#6	1	1.630	0.189	0.000	0.000	73.000	TR55	1.89	0.162
	Σ	**1.630**						**1.89**	**0.162**
#5	1	3.590	0.233	0.000	0.000	73.000	TR55	4.04	0.359
	Σ	**3.590**						**4.04**	**0.359**
#4	1	0.690	0.175	0.000	0.000	73.000	TR55	0.81	0.070
	Σ	**0.690**						**0.81**	**0.070**
#3	1	1.820	0.210	0.000	0.000	73.000	TR55	2.04	0.176
	Σ	**1.820**						**2.04**	**0.176**
#2	1	0.990	0.107	0.000	0.000	73.000	TR55	1.34	0.099
	Σ	**0.990**						**1.34**	**0.099**
#1	Σ	**22.670**						**23.69**	**2.254**

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1	1. Forest with heavy ground litter	14.35	53.00	369.00	0.950	0.107
#2	1	**Time of Concentration:**					**0.107**
#3	1	1. Forest with heavy ground litter	12.01	79.00	658.00	0.870	0.210
#3	1	**Time of Concentration:**					**0.210**
#4	1	1. Forest with heavy ground litter	15.82	100.00	632.00	1.000	0.175
#4	1	**Time of Concentration:**					**0.175**
#5	1	1. Forest with heavy ground litter	16.36	140.00	856.00	1.020	0.233
#5	1	**Time of Concentration:**					**0.233**
#6	1	1. Forest with heavy ground litter	15.86	108.00	681.00	1.000	0.189

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#6	**1**	**Time of Concentration:**					**0.189**
#7	1	1. Forest with heavy ground litter	18.92	211.00	1,115.00	1.100	0.281
#7	**1**	**Time of Concentration:**					**0.281**
#8	1	1. Forest with heavy ground litter	24.57	274.00	1,115.00	1.250	0.247
#8	**1**	**Time of Concentration:**					**0.247**
#9	1	1. Forest with heavy ground litter	24.14	120.00	497.00	1.240	0.111
#9	**1**	**Time of Concentration:**					**0.111**
#10	1	1. Forest with heavy ground litter	10.05	74.00	736.00	0.800	0.255
#10	**1**	**Time of Concentration:**					**0.255**

Water Tank Site
Pre-Development Calculations
Contract U13

25 Year Storm

Lawrence Hale

Terradon Corporation
401 Jacobson Drive
Poca, WV 25143

Phone: (304)-755-8291

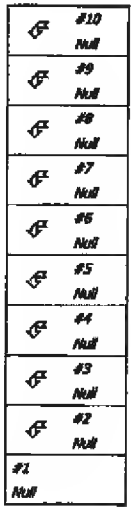
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	4.130 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Null	#1	==>	End	0.000	0.000	Total Outflow
Null	#2	==>	#1	0.000	0.000	Discharge Point 1
Null	#3	==>	#1	0.000	0.000	Discharge Point 2
Null	#4	==>	#1	0.000	0.000	Discharge Point 3
Null	#5	==>	#1	0.000	0.000	Discharge Point 4
Null	#6	==>	#1	0.000	0.000	Discharge Point 5
Null	#7	==>	#1	0.000	0.000	Discharge Point 6
Null	#8	==>	#1	0.000	0.000	Discharge Point 7
Null	#9	==>	#1	0.000	0.000	Discharge Point 8
Null	#10	==>	#1	0.000	0.000	Discharge Point 9



Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#10	1.680	1.680	2.51	0.22
#9	3.510	3.510	6.29	0.47
#8	5.470	5.470	8.26	0.74
#7	3.290	3.290	4.85	0.44
#6	1.630	1.630	2.56	0.22
#5	3.590	3.590	5.50	0.49
#4	0.690	0.690	1.10	0.09
#3	1.820	1.820	2.78	0.24
#2	0.990	0.990	1.77	0.13
#1	0.000	22.670	32.73	3.05

Structure Detail:

Structure #10 (Null)

Discharge Point 9

Structure #9 (Null)

Discharge Point 8

Structure #8 (Null)

Discharge Point 7

Structure #7 (Null)

Discharge Point 6

Structure #6 (Null)

Discharge Point 5

Structure #5 (Null)

Discharge Point 4

Structure #4 (Null)

Discharge Point 3

Structure #3 (Null)

Discharge Point 2

Structure #2 (Null)

Discharge Point 1

Structure #1 (Null)

Total Outflow

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#10	1	1.680	0.255	0.000	0.000	73.000	TR55	2.51	0.225
	Σ	1.680						2.51	0.225
#9	1	3.510	0.111	0.000	0.000	73.000	TR55	5.29	0.474
	Σ	3.510						5.29	0.474
#8	1	5.470	0.247	0.000	0.000	73.000	TR55	8.26	0.735
	Σ	5.470						8.26	0.735
#7	1	3.290	0.281	0.000	0.000	73.000	TR55	4.85	0.443
	Σ	3.290						4.85	0.443
#6	1	1.630	0.189	0.000	0.000	73.000	TR55	2.56	0.219
	Σ	1.630						2.56	0.219
#5	1	3.590	0.233	0.000	0.000	73.000	TR55	5.50	0.485
	Σ	3.590						5.50	0.485
#4	1	0.690	0.175	0.000	0.000	73.000	TR55	1.10	0.094
	Σ	0.690						1.10	0.094
#3	1	1.820	0.210	0.000	0.000	73.000	TR55	2.78	0.238
	Σ	1.820						2.78	0.238
#2	1	0.990	0.107	0.000	0.000	73.000	TR55	1.77	0.133
	Σ	0.990						1.77	0.133
#1	Σ	22.670						32.73	3.046

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1	1. Forest with heavy ground litter	14.36	53.00	369.00	0.950	0.107
#2	1	**Time of Concentration:**					0.107
#3	1	1. Forest with heavy ground litter	12.01	79.00	658.00	0.870	0.210
#3	1	**Time of Concentration:**					0.210
#4	1	1. Forest with heavy ground litter	15.82	100.00	632.00	1.000	0.175
#4	1	**Time of Concentration:**					0.175
#5	1	1. Forest with heavy ground litter	16.36	140.00	856.00	1.020	0.233
#5	1	**Time of Concentration:**					0.233
#6	1	1. Forest with heavy ground litter	15.86	108.00	681.00	1.000	0.189

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#6	**1**	**Time of Concentration:**					**0.189**
#7	1	1. Forest with heavy ground litter	18.92	211.00	1,115.00	1.100	0.281
#7	**1**	**Time of Concentration:**					**0.281**
#8	1	1. Forest with heavy ground litter	24.57	274.00	1,115.00	1.250	0.247
#8	**1**	**Time of Concentration:**					**0.247**
#9	1	1. Forest with heavy ground litter	24.14	120.00	497.00	1.240	0.111
#9	**1**	**Time of Concentration:**					**0.111**
#10	1	1. Forest with heavy ground litter	10.05	74.00	736.00	0.800	0.255
#10	**1**	**Time of Concentration:**					**0.255**

TERRADON

TRANSMITTAL LETTER

Mailing Address:
P.O. Box 519
Nitro, WV 25143

Shipping Address:
Rock Branch Industrial Park
401 Jacobson Drive
Poca, WV 25159

Phone: (304) 755-8291
Fax: (304) 755-2636
Internet: http://www.terradon.com

Date: September 22, 2011

To: **Megan Grose**
West Virginia Department Environmental Protection
Division of Water and Waste Management
Construction NPDES
601 57th Street, SE
Charleston, WV 25304

Project Number: **10910-0029**

Sender: Jason Asbury

Via:

☐ Mail ☐ Federal Express ☐ DHL

☐ UPS ☒ Hand Delivered ☐ Picked up at TERRADON

Description of Item(s):
3 – copies of plans (Tank Access and Water Tank Site)
3 – copies of stormwater calculations
1 – copy of application
1 – submission fee check

Remarks:
For your review and comment

CC: file

RECEIVED SEP 23 2011